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# CANCER FACTS

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National Cancer Institute • National Institutes of Health

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## Fluoridated Water

Virtually all water contains fluoride. In the 1940s, scientists discovered that the higher the level of natural fluoride in the community water supply, the fewer the dental caries (cavities) among the residents. Currently, more than half of all Americans live in areas where fluoride is added to the water supply to bring it up to the level considered best for dental health.

The possible relationship between fluoridated water and cancer has been debated at length. Although earlier animal studies revealed no evidence that fluoride is carcinogenic, a National Toxicology Program study completed in April 1990 generated considerable interest in this subject. In this study, a small number of male rats (4 of 130) developed bone cancer after drinking water containing fluoride in amounts that were 25 to 100 times greater than the levels found in municipal fluoridated water. No cancers were seen in the female rats or in the male or female mice that were also tested. According to the scientists who conducted the study, the fact that a few male rats developed tumors could not be used as firm evidence to link fluoride ingestion with cancer.

In February 1991, the Public Health Service reported the results of a year-long survey that showed no evidence of an association between fluoride and cancer in humans. The survey, which involved a review of more than 50 human epidemiology studies produced over the past

40 years, led the investigators to conclude that optimal fluoridation of drinking water "does not pose a detectable cancer risk to humans as evidenced by extensive human epidemiological data reported to date."

In one study, scientists at the National Cancer Institute evaluated the relationship between fluoridation of drinking water and the cancer mortality (deaths) in the United States during a 36-year period and the relationship between fluoridation and the cancer incidence (rate) during a 15-year period. After examining more than 2.2 million cancer death records and 125,000 cancer case records in counties using fluoridated water, the researchers saw no indication of a cancer risk associated with fluoridated drinking water.

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### **Sources of National Cancer Institute Information**

#### **Cancer Information Service**

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

#### **NCI Online**

##### ***Internet***

Use <http://www.cancer.gov> to reach NCI's Web site.

##### ***CancerMail Service***

To obtain a contents list, send e-mail to [cancermail@icicc.nci.nih.gov](mailto:cancermail@icicc.nci.nih.gov) with the word "help" in the body of the message.

#### **CancerFax® fax on demand service**

Dial 301-402-5874 and listen to recorded instructions.

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